From: Warr (Kettler), Kristie
To: Moore, Gary
Cc: Cobb, Derrick; Criner, Jeffrey J.
Subject: RE: FT1004 Sample Results
Date: Wednesday, October 22, 2014 1:42:16 AM

Gary,
Per my email below, I sent the following questions to Accutest.

1. Why are the totals analyses reported as different matrices? The following analyses were analyzed and classified as an oil: VOCs, TPH, metals, BTU, sulfide, ignitability, and pH. The following analyses were analyzed and classified as non-aqueous liquid: SVOCs, Herbicides, Pesticides, and PCBs.
2. When we submitted this sample, we sent in sample volume for an oil matrix (2, 32 oz jars). How do you take these two containers and split the material for all the different analyses?

The lab responded with the following statement:
The answer to this is pretty simple. The sample was logged in as an oil at the time of receipt, which was the matrix that was indicated on the chain of custody. The analyses for VOCs, TPH, metals, BTU, sulfide, ignitability and pH were performed as an oil matrix with no problems. When the samples were prepared as an oil for the extractable test codes (SVOA, herbicides, pesticides and PCBs), it was discovered that the sample was not miscible with the extraction solvent, methylene chloride. This prevented us from performing the preparation as a waste dilution (EPA method 3580). Instead, we performed the separatory funnel extraction (EPA method 3510), which allowed us to concentrate the extract in order to achieve lower limits of detection. In order to do this, the matrix had to be changed from an oil to a liquid for these tests. Because both phases were acceptable descriptions of the sample, we were able to report the first test codes mention above as oils, as requested on the COA. The extracted test codes had to be reported as a liquid due to the complication we experienced with the extraction solvent.

From: Warr (Kettler), Kristie
Sent: Tuesday, October 21, 2014 9:15 AM
To: 'Moore, Gary'
Cc: Cobb, Derrick; Criner, Jeffrey J.
Subject: RE: FT1004 Sample Results
Gary,
I thought this particular sample was one we had asked for explicit details from the lab previously, but it was FT1002. I have sent an email to the lab asking for details on this analysis, but this is what I do know.
The TCLP analysis is reported as a water because of the TCLP process. After the lab performs the TCLP process, they are left with a water matrix. So the TCLP analysis needs to be thought of as a completely different sample.
The totals analysis is different from the TCLP. The following analyses were analyzed and classified as an oil: VOCs, TPH, metals, BTU, sulfide, ignitability, and pH. The following analyses were analyzed and classified as non-aqueous liquid: SVOCs, Herbicides, Pesticides, and PCBs. I have some recollection of the reasoning behind this, but I would be putting many assumptions down and would prefer to get an explanation from the lab.
I have attached two pictures that the lab sent us last week of the remaining sample volume. The lab described this remaining sample as an oily wet sludge. When we collected the sample, we classified it as an oil and only submitted 2, 32 ounce glass jars of material. One of the questions I am asking the lab is how they start with those two containers and then divide it up for the many analyses that were performed.
Here is a general explanation I have received from the lab that gives an overview of complications that have arisen from the samples. “The condition of the samples is very poor, the oil content is high, and the extracts will more than likely be viscous. These conditions are mostly created by

the sample homogenization process, which is leaving us with thick, oily extracts to analyze. However, even if the oil phase were to be separated, I still doubt that we, or any lab for that matter, would be able to achieve the desired reporting limits without compromising data quality and instrumentation. These are not just difficult samples, but some on the most difficult samples I have ever encountered in this field. Despite the challenges, we will continue to attempt to achieve the lowest limits we can observe with confidence."
As you can see from their explanation, they are not always dealing with the raw sample. The extraction process of several methods leaves the lab with an extract that is analyzed. These homogenized samples many times resulted in nasty extracts.
You stated below you feel like this is a big waste of money. I'm sorry you feel that way. I realize there were some samples that could not get low enough reporting limits to meet TCLP criteria and I do have detailed explanations from the lab on those specific samples. Besides this sample, are there any other samples that are creating a problem. If there are additional samples, I will go back through documentation to see what I can find.
These samples that were collected and submitted for analysis were a homogenization of oil, water, and sludge. They definitely presented problems for the laboratory. I have confidence in Accutest and the job they performed. I do not believe that any other of our go-to labs could have performed better.
Kristie

From: Moore, Gary [mailto:Moore.Gary@epa.gov]
Sent: Monday, October 20, 2014 6:59 PM
To: Warr (Kettler), Kristie
Cc: Cobb, Derrick; Criner, Jeffrey J.
Subject: FT1004 Sample Results

Kristie:
I know we talked about this sample previously but I am still confused and it is causing me problems for determining how to dispose of the material.
We requested the following from the samples that we sent to the lab:
Totals Analyses: VOA 8260 List, TPH, Metals, ABN, Herbs, Pests, PCB,
General Chemistry: BTU, Ingnitability, Sulfides, pH, Cyanides
TCLP: VOA, ABN, Herbs, Pests, Metals
We got all the data but it does not appear to be of the total sample. They used different matricies to give us the data.
Oil Matrix: Totals - VOA, TPH, Metals, General Chemistry
Water Matrix: TCLP - VOA, ABN, Herbs, Pests, and Metals
Liq - Non Aquaeous Matrix: ABN, Herbs, Pests, PCB
It appears to me that the results don't accurately represent the entire sample that we sent to the lab because it was broken down into 3 different matricies and analyzed only paritially for the 3 different matricies. I really need someone to explain this to me. How do I make sence of this data? How do I use it for what its purpose was for?
I feel like this was a big waste of money.
Thanks

Gary Moore
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you received this email in error, please notify the sender by return e-mail and delete this email from your system. Thank you.